1.0 EXECUTIVE SUMMARY

Pacific Gas and Electric (PG&E) seeks to upgrade the electric transmission system in southern Sonoma County by installing a new 115 kV circuit between the existing Lakeville Substation near Petaluma and the existing Sonoma Substation in Sonoma (the "Lakeville-Sonoma 115 kV Transmission Line Project"). In order to mitigate potential environmental impacts of the project, PG&E proposes to co-locate the Lakeville-Sonoma project with an existing 115 kV circuit rather than creating an entirely new transmission corridor between the Lakeville and Sonoma substations or installing a second set of transmission poles within the existing corridor.

The environmental baseline for assessing the environmental impacts of the project includes among its more prominent features the existing overhead transmission line between the Lakeville and Sonoma substations. Co-locating the project and the existing Lakeville-Sonoma circuit on the same transmission poles will result in only minor, incremental changes to the baseline. As a result, all potentially significant project impacts can be mitigated to less than significant levels without compromising the effectiveness of the existing Lakeville-Sonoma line[1].

The project is needed to address low voltage and reliability problems that currently exist in the system and that could result in system overloading, equipment damage, and power outages in and around the cities of Napa and Sonoma. The transmission system in the Napa-Sonoma area is made up of a 115 kV transmission loop that extends from the Lakeville Substation to the Sonoma Substation, through Napa to Pueblo Substation and up to Silverado Trail, over to Fulton Substation and then back down to Lakeville Substation. If there were an outage resulting in a "break" in the system between Lakeville and Sonoma, the only remaing electric source to Pueblo and Sonoma substations is from Fulton Substation, located 35 and 50 miles away, respectively.

With electric power being transmitted from Fulton Substation through a single long circuit with limited capacity, power losses on that circuit would become excessive, resulting in sagging voltages at Sonoma and Pueblo substations. An outage of the line between Lakeville and Sonoma, particularly during the hot summer days when peak electric demand occurs, could result in a sudden voltage drop, system overloading and power outages to the cities of Sonoma and Napa. By installing a second transmission line from Lakeville to Sonoma substation, PG&E can provide the needed transmission capability to the area to eliminate the voltage deficiency and maintain compliance with applicable grid reliability criteria.

1 No upgrades to the existing Lakeville-Sonoma transmission circuit are proposed or needed (other than the physical modifications necessary to accommodate co-location with the Lakeville-Sonoma project). However, the existing circuit will still be needed at its present capacity to maintain compliance with California Independent System Operator (ISO) grid reliability criteria, even after the project is in service.

Furthermore, by increasing overall capacity in the project area, installation of a second Lakeville-Sonoma circuit will allow PG&E to meet future electrical demand growth in the Sonoma and Napa areas.

The Lakeville-Sonoma 115 kV Transmission Line Project includes:

- Installation of a new approximately 7.23 mile-long overhead 115 kV transmission circuit on a rebuilt version of PG&E's existing Lakeville-Sonoma 115 kV transmission line, designed to accommodate both circuits.
- Modification of the existing Lakeville and Sonoma substations by adding new equipment to handle the extra circuit. All new equipment would be contained within PG&E's existing property.

Each circuit is made up of three wires or "conductors." The existing single-circuit line has three conductors on each pole, so the rebuilt double-circuit line will have six conductors on each pole. The existing transmission line uses wood poles, which would be replaced with somewhat taller wood and tubular steel poles necessary to accommodate the second circuit in compliance with the California Public Utilities Commission's (CPUC) safety requirements. Because the taller poles required to meet these standards allow for longer spans, about 20 fewer poles will be needed with the replacement line. The existing poles are generally 45-70 feet tall and the new poles would be generally 55-100 feet tall[2]. The project area consists mainly of open space, grazing lands and vineyards with some low/medium density residential development near the City of Sonoma.

The project was planned and engineered to avoid or minimize environmental impacts, as well as to minimize ratepayer costs to the extent possible consistent with planning and environmental objectives. The project makes use of an existing utility corridor, which is consistent with Sonoma County's General Plan policy encouraging consolidation of multiple utility lines into common utility corridors wherever practicable. It modifies existing facilities, which are part of the existing environmental baseline to which project impacts must be compared under the California Environmental Quality Act (CEQA), rather than constructing entirely new facilities. It also takes advantage of existing access roads needed to construct and maintain the transmission line.

[2] These figures assume implementation of the "low cost" electric and magnetic field (EMF) reduction measures recommended in PG&E's preliminary EMF Management Plan for the project, which include increasing the height of some poles an additional ten feet to reduce field strength at the edge of the right-of-way.

This Proponent's Environmental Assessment (PEA) was produced to evaluate potential environmental impacts of the project. Some of the key environmental issues evaluated were:

- Potential impacts to biological resources (e.g., wetlands, vernal pools, streams, California red-legged frog, California freshwater shrimp).
- Potential to spread invasive plants and Sudden Oak Death pathogen.
- Potential impacts to heritage trees (e.g., valley oaks).
- Potential visual impacts in scenic areas.

However, the analysis in this PEA shows that **all potentially significant impacts of the project can be avoided or mitigated to a less than significant level**.

PG&E is submitting this PEA to the CPUC in support of its Application for a Permit to Construct ("PTC") the project, which is part of the grid expansion plan approved by the ISO. While the ISO is responsible for transmission planning in California, the CPUC retains exclusive jurisdiction over the siting of ISO-approved transmission projects and is the lead agency with respect to such projects under CEQA (Cal. Pub. Res. Code Sec. 21000 et seq.). Therefore, in the Application of which this PEA is a part, PG&E seeks from the CPUC a PTC confirming the proposed route for the ISO-approved project, based on environmental review required by CEQA, and authorizing construction of the project along the CPUC-approved route, consistent with General Order 131-D. The CPUC's "Information and Criteria List" for submittal of PEAs was used to produce this report. Because all project impacts are less than significant or can be mitigated to a less than significant level, it is anticipated that the CPUC will be able to prepare a Mitigated Negative Declaration for its review of the project per CEQA. After permits are obtained, construction is expected to take approximately 19 months to complete. PG&E seeks to have the project in operation by summer 2007.

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